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ABSTRACT

Interviews were conducted with 721 students in fourth, sixth, and eighth grades to study whether children's perceived reality of television would affect the relationship between pro-social and anti-social television content and pro-social and anti-social behavior. Social behavior variables, a perceived reality index, and television exposure variables (reflecting exposure to pro-social and anti-social behaviors) were derived from the responses. Overall, results from factor and regression analyses of the data did not support the assumed role of perceived reality in determining the impact of exposure to television on children's social behavior. Further exploratory analyses and methodological issues are discussed. Appendixes give conceptual and operational definitions of the pro-social and anti-social behaviors which were measured. (AA)

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Children's Perceived Reality of Television and the Effects of Pro- and Anti-Social TV Content on Social Behavior

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Introduction

Research on children and television currently seems to concentrate on the study of conditional processes of motivation, interpretation and perception that can help explain why the same media stimulus can have different effects on children (Reeves and Greenberg, 1977). No longer do we assume that mere exposure to television messages will result in a uniform and predictable result for an entire child audience. Several variables have been examined with the goal of better explaining the complexities of media effects on children. Effects have been suggested which are contingent on variables such as parental mediation of television viewing (McLeod, Atkin and Chaffee, 1972; Ball and Bogatz, 1971); childrens' identification with television characters (Maccoby and Wilson, 1957; Meyer, 1973); the motivations for exposure to media (Greenberg, 1974); and childrens' perception of the reality of TV portrayals (Feshbach, 1971).

Empirical tests of conditional media effects propositions, however, are infrequent. Such tests necessitate that variables other than exposure to content and attitudes or behaviors be measured and evaluated. The conditional aspects of media effects are often only theoretically assumed, leaving the conditional variables to be studied descriptively, or at best as dependent variables. There are few studies which examine the extent to which the prediction of attitudes and behaviors from exposure to media content can be enhanced by accounting for mediating or contingent conditions.

The present study is about childrens' perceived reality of television. Several studies have suggested that accounting for childrens' belief in

the true-to-life nature of TV content will increase the prediction of television effects (e.g. Feshbach, 1971; Hawkins, 1977; Greenberg and Reeves, 1977). The most general expectation about the likely role of perceived reality is that to the extent TV content is perceived to be real-to-life, children's attitudes and behaviors are more likely to be consistent with the content of their television experiences. Perceiving program content to be realistic is assumed to make TV information more socially useful, and more likely to be assimilated equitably with information from non-television sources.

The implicit assumption in most research is that perceived reality of TV operates as an intervening variable in the effects process. Similar to other concepts that are theoretically hypothesized as intervening variables, however, researchers have frequently studied perceived reality descriptively or as a dependent or independent variable.[1] Descriptive studies have concentrated on topics such as dimensions of perceived reality (Hawkins, 1977), and the levels of perceived reality for various program and character types and for perceived reality at different levels of content abstraction (Greenberg and Reeves, 1977). Research using perceived reality as a dependent variable has focused on predicting the variance in children's reality perceptions by accounting for variables such as childhood experiences with real-life counterparts of TV content (Greenberg and Reeves, 1977); the uses and gratifications of different TV programming (Reeves, 1974; Greenberg, 1974); time context of the programming (i.e. programs set in the past, present or future, Gordon, 1973); socio-economic background (Dominick and Greenberg, 1970); age (Lyle and Hoffman, 1971; Ward, 1971; and Greenberg and Reeves, 1977); and overall exposure to the medium (Greenberg and Reeves, 1977).

[1]For a complete review of literature on children's perceived reality of television see either Greenberg and Reeves (1977), or Hawkins (1977).

A smaller group of studies is frequently classified as demonstrating the role of perceived reality in determining the effects of television. In these studies, perceived reality is theoretically hypothesized to be a mediating variable, however, empirically it is usually treated as an independent variable. In a series of experiments manipulating perceptions of reality while holding content constant, Feshbach (1971) found those exposed to content labeled as real were significantly more aggressive than those exposed to content labeled as fiction. While these experiments suggest that a relationship between content realism and behavior exists, the research design does not permit conclusions about the effects of perceived reality as a variable mediating the effects of TV on behavior.

In other studies, the realism of program content has been used as a predictor of recall of scenes (Osborn and Endsley, 1971); constructive play (Noble, 1973); and survey measures of aggression (Greenberg, 1974). While some of these studies deal more with experimentally manipulated reality rather than with perceived reality, the interpretation of how content realism determines various criterion attitudes and behaviors comes from essentially the same two variable relationship. What is lacking from these studies is information about the additional variance accounted for in television effects beyond variance that can be explained by exposure to TV content consistent with the behaviors of interest. This is especially important given the finding from past research that perceived reality and general exposure to TV are at least moderately correlated. A necessary research question then becomes what unique effect does perceived reality have on behavior after accounting for mere exposure.

The purpose of this study was to determine whether accounting for childrens' perceived reality of television will contribute to the relationship between pro- and anti-social TV content and pro- and anti-social behavior.

The major hypothesis, based on past theoretical assumptions about the conditional role of perceived reality in media effects, was that the relationship between content and effects would be significantly improved by accounting for perceptions of content realism. Further, because children's belief in the reality of TV decreases with age, it was hypothesized that the contribution of perceived reality to explaining effects should be greater for younger children than for older children.

The theoretical assumptions about the role of perceived reality in explaining TV effects were not hypothesized to be behavior specific. The process should work equally well for both pro- and anti-social behaviors. Eight behaviors were chosen for this study - three anti-social behaviors: physical aggression, verbal aggression, and deceit; and five pro-social behaviors: altruism (helping, sharing, and cooperating), affection, expressing feelings of others, expressing feelings of self, and reparation. A recent content analysis of the pro- and anti-social behaviors from a sample of 92 prime-time and Saturday morning TV programming indicated that these categories accounted for a substantial majority of the behaviors coded in the analysis (Greenberg, Atkin, Edison, and Korzenny, 1977).[1] A conceptual definition of each of the behaviors can be found in Appendix A.

Methodology

Interviews were conducted with 721 students in the fourth, sixth and eighth grades from Verona, Wisconsin and Haslett, Michigan during May, 1976. Questionnaires were administered to the fourth and sixth graders in a group

[1]The report of this content analysis contains a detailed conceptual and operational description of each behavior as well as information concerning the coding of the behaviors.

on two successive days for 40 minutes each day. Interviewing for the eighth graders was completed in one 50-minute period. The all-white sample included an equal number of males and females. The students came from a variety of lower, middle, and upper-middle-class backgrounds.

Variables

While the questionnaire used for this study contained several different items related to the effects of television on childrens' social behaviors, only a few of those variables were used in this research: (1) a television exposure index for each of the eight behaviors; (2) an index of childrens' perceived reality of TV; (3) eight behavioral indices which were used as dependent variables.

Television Exposure Variables. For each child, eight different exposure measures were constructed by combining content analysis data with information on children's exposure to TV. Viewing frequency for 29 of the top prime-time and Saturday morning TV shows was determined by having children check whether they watched each show every week, most weeks, some weeks, or never. This information was then multiplied by the frequency that each show portrayed each of the eight behaviors in the study. The conceptual definitions used for the behaviors in the content analysis and examples of their occurrence can be found in Appendix A. The resultant index was a measure of the frequency of viewing each of the eight pro- and anti-social behaviors.

Perceived Reality Index. Six separate items were used to measure childrens' perceived reality of television. They were:

"The fighting on TV is just like the fighting you see in real life."

"TV stars on TV yell at each other the same way people yell in real life."

"The same things that happen to people on TV happen to people in your neighborhood."

[1]Several tests of the reliability of this method of measuring TV exposure have been conducted which indicate it is a highly stable measure. In two different cases the test/re-test reliability over two weeks for elementary school children was reported as .72 and .83 using only 24 TV shows and yes/no responses (Miller, 1977).

"The way people help each other on TV is just like the way people help in real life."

"People on TV shows are just like people in the real world."

"TV shows tell about life the way it really is."

Responses to all of the items were: almost always, usually, sometimes, or never. Intercorrelations among all of the items were significant beyond the .01 level. The Kuder-Richardson reliability for the six item summated index was .62.

Social Behavior Variables. Eight social behaviors were measured with indices which each comprised three different types of measures: (1) hypothetical situation items which asked children to imagine themselves in specific situations and to indicate their probable responses; (2) contingent report items which asked children to indicate their probable responses to actual situations as they occur; and (3) behavior report items which asked children to indicate their frequencies of specific behaviors in the past week. Examples of the specific questions used for the eight behaviors are listed in Appendix B.

Results

The general hypothesis was that childrens' perceived reality of television would significantly increase the prediction of TV effects, after accounting for mere exposure to television. Table 1 shows the results of a heirarchical regression analysis which determined the variance in eight behaviors that could be uniquely attributed to the perceived reality index. The variance in all eight of the behaviors was decomposed into variance explained by the exposure measure and variance explained by the reality index after accounting for exposure. An F test was then used to determine

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Table 1 about here

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whether the reality index made a significant contribution to the overall explained variance. From this analysis, perceived reality made a significant contribution to only one relationship - that between exposure to affection on TV and affectionate behavior. Given that one out of eight relationships could be expected to improve by chance alone, the results were not supportive of the study hypothesis or of the theoretical significance of perceived reality in general.

Given the theoretical attention that perceived reality has received, other analyses, not suggested by past theory, were done to fully explore any role perceived reality may have in explaining television effects. Examination of the zero-order correlations between the individual reality items and the behaviors showed that in every case, there were one, two, or three items that predicted the eight behaviors better than the entire index. This finding, together with different patterns of intercorrelation among the reality items, suggested there may be two or more dimensions of perceived reality that differentially predict the behaviors and surpressed the correlations between the entire index and behavior.

A principle components factor analysis produced two factors that accounted for 50% of the variance in the rotated matrix. Those items with factor loadings above .40 on factor 1 were the perceived reality of helping on TV (.49), and people on TV (.54), and the question about life on TV being like life in real life (.40). Factor 2 was comprised of the reality of fighting (.47), and yelling (.48).

This result suggested the possibility of a pro- and anti-social perceived reality dimension - the reality of fighting and yelling representing anti-social reality, and the reality of helping, people and life representing pro-social reality. In the absence of further evidence, this interpretation would be

premature because of the few number of perceived reality items comprising each factor. The two factors did, however, have some predictive validity.

The most instructive benefit of the factors was the difference in their zero-order correlations with the behaviors (Table 2).

Table 2 about here

First of all, one of the two factors was a better predictor of the behaviors than the summated index in all cases. Second, the two factors predicted their behavioral counterparts. Pro-social perceived reality was negatively correlated with the anti-social behaviors and positively correlated with the pro-social behaviors. The anti-social factor, while positively correlated with the anti-social behaviors, was not related to the pro-social behaviors.

The next step was to determine whether the two factors would significantly increase the prediction of the behaviors after accounting for exposure. Table 3 shows the results of this analysis.

Table 3 about here

For all of the behaviors except altruism, one of the two reality dimensions significantly increased the multiple correlations. For all three anti-social behaviors, as well as affection and feelings of self, the pro-social reality dimension made a significant contribution. The only behavior category which anti-social perceptions of reality contributed to was reparation. (For all of the behaviors, the perceived reality dimension consistent with the behavior was added to the equation first.)

The last analysis looked at grade differences in the unique contribution of perceived reality to the behaviors. From past research, the expectation was that the effects of perceived reality on the relationship between content and effects would be greatest for the younger children.

Table 4 shows the contribution of the two perceived reality factors to the prediction of the behaviors for each grade. Similar to the analysis for the total group, the pro-social reality factor was the only one which

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Table 4 about here

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significantly increased the multiple correlations (with the exception of the anti-social factor for deceit among sixth graders).

There was at least one major difference in the total group analysis and the grade analysis. For the pro-social behaviors, the pro-social reality factor was a significant contributor for only fourth graders, and for the anti-social behaviors, the same factor was significant only for the eighth graders. The same breakdown of grade and behaviors also produced the highest overall multiple correlations. For the anti-social behaviors, the correlations increased linearly with grade. For the pro-social behaviors, the highest correlations were in the fourth grade followed by the eighth and sixth grades. Consistent with the zero-order correlations, the betas for the final regression equations indicated that the pro-social reality factor was a positive predictor of pro-social behavior for the fourth graders and a negative predictor of anti-social behavior for the older group.

The two perceived reality factors also showed changes in the level of reality for the different grades. The pro-social factor was correlated -.32 ($p<.001$) with grade while the anti-social reality factor was correlated -.02 (n.s.) with grade.

Discussion

Overall, the results are not supportive of the assumed role of perceived reality in determining the impact of exposure to TV on childrens'

social behavior. Accounting for a six-item reality index, which was thought to represent a general reality orientation to television, only increased the prediction of affectionate behavior. It is possible that only six items did not accurately reflect childrens' reality perceptions, however, the measures of TV exposure and social behaviors were quite detailed, and with a sample size of 721, it would seem that if there was any possibility of a relationship, it should have been present in these data.

Further exploratory analyses were done, however, to fully test the relationship of perceived reality to television content and effects. The two dimensions of perceived reality identified in the additional analyses seem to be more interesting than the general reality index. The pro-social factor of perceived reality appears to be especially useful in enhancing the prediction of TV effects; as a positive predictor for pro-social behavior and a negative predictor for anti-social behavior. This result could signal a need to reconceptualize the status of perceived reality as an intervening variable in describing the effects of television. These data suggest that perceived reality is not a general orientation to television - at least in terms of the prediction of these behaviors. The realism of hitting and yelling intervene differently than the reality of helping, people and life.

Accounting for perceived reality makes the most difference for fourth-grade pro-social behaviors. For all five of the pro-social behaviors the multiple correlations were substantially increased. This group of children also had the highest overall relationships between exposure to pro-social behaviors on TV and behaviors in real life. This result suggests that the pro-social reality items may show higher absolute levels of perceived reality and would therefore increase the impact of pro-social behaviors on TV. The means of the pro-social reality items (helping, people and life), however, were not significantly different from the anti-social items. Yelling and

helping have the highest means of the six items (2.55 and 2.42 respectively on a scale of 1 to 3, the higher value representing greater reality).

One possible explanation may be that the two factors represent perceived reality estimates based on different types of information. It is probable that children have actual experiences with most of the pro-social behaviors, and when asked to make judgments about similar TV behaviors, those experiences provide the basis of the judgments. For the anti-social behaviors, especially for fourth graders, realism is likely based on aspects of behavior other than their correspondence with behaviors in real life. The actor performing the behavior may look and sound real, and the context of the behavior may be realistic, but the child has no sense of how the TV behavior represents real life. Therefore, while the two behaviors may rate the same on a reality scale, because they are based on different types of information, they may be differentially important in explaining TV effects. In the case of the pro-social behaviors for the fourth graders, reality based on actual experiences may be more important.

The other behaviors affected by perceived reality were two of the three anti-social behaviors for the oldest subjects. Looking at the specific categories suggests the same interpretation as for the pro-social behaviors among the youngest group. Only the prediction of verbally aggressive and deceitful behaviors was affected by perceived reality. By eighth grade, children may have enough experiences with these behaviors to be able to accurately compare them with similar TV behaviors, while the reality of physical aggression on TV may still be evaluated with information not related to the correspondence of the behavior with actual experiences.

In past studies of the perceived reality of television, the policy translation of research findings has always suggested that children be taught that TV is not real, and that it should not be used to learn how

to behave or solve problems. While it may be generally desirable for children to understand that dramatic experiences require a willing suspension of belief, there may be unexpected harm in teaching children that television does not reflect reality. In this study, perceiving TV to be real increased the incidence of pro-social behavior and decreased the incidence of anti-social behavior.

At least two important questions concerning these results remain. First, more needs to be done to properly identify a pro- and anti-social dimension of perceived reality. All of the statistically significant and theoretically interesting results in this study were obtained using data that were not originally collected to confirm or disconfirm a multidimensional approach to perceived reality. The factors defined here are probably more a function of the original items in the reality index than they are of a two-dimensional perceptual process. The important suggestion to be made is that perceived reality may be multidimensional and that the dimensions may differentially influence how television effects children. The more detailed dimensional description of perceived reality introduced by Hawkins (1977), may provide a starting point for testing relationships between TV content, perceived reality and TV effects.

Second, these data suggest only that perceived reality makes a difference in predicting effects of television. There is no evidence that can help explain how perceived reality makes a difference. A general theoretical consensus seems to be that perceived reality intervenes between exposure and effect. However, it is yet to be shown whether the intervention is additive, interactive or contingent on other variables. While the multiple regression procedures used in this study assume an additive model, alternative explanations of how perceived reality works need to be considered and appropriately tested.

The added variance accounted for by perceived reality, while statistically significant in several cases, is certainly not of a magnitude to warrant claims of great advances in predicting TV effects. Part of the interpretation of the value of accounting for perceived reality depends on a general orientation to media effects research. Conservative "type I" approaches to evidence might dismiss the role of perceived reality because of the small amount of variance it accounts for in the criterion behaviors, even with exposure added in the predictive equations. A "Type II" approach to this evidence, however, would maintain that explaining five per cent of important social behaviors is significant and, therefore, the addition of perceived reality to a model of TV effects seems worthwhile. Further, few people would argue that media variables should account for the majority of variance in social behaviors. If we use the expected role of television in explaining behavior as a base line measure against which to compare third variables (i.e. perceived reality), instead of the total behavior, which is obviously influenced by non-media sources as well, then the addition of significant intervening variables appears even more important.

In studying other third variables that help explain individual and sub-group differences in how media effect children, it seems important that we at least measure and simultaneously evaluate all three variables. Studying perceived reality descriptively, for example, or as an independent or dependent variable in a two-variable design, could lead to errors in conclusions about television effects or to a misallocation of effort, should the variable be of little value in explaining effects. This applies to several third variable explanations of TV effects, including the role of identification with TV characters, children's uses and gratifications of TV content, and parental mediation and interpretation of television. While we explore

these variables independent of exposure and impact, we should also study them within the process they are expected to have a role in explaining.

TABLE 1

Heirarchical Decomposition of the Independent Contributions of TV Exposure and Perceived Reality of TV to Eight Behaviors*

Behaviors	Exposure R	Exposure + Perceived Reality R	F**	p <
Physical Aggression	.259	.262	1.31	n.s.
Verbal Aggression	.093	.096	< 1	n.s.
Deceit	.018	.019	< 1	n.s.
Altruism	.124	.125	< 1	n.s.
Affection	.130	.178	10.94	.001
Feelings of Others	.174	.177	< 1	n.s.
Feelings of Self	.105	.122	2.81	n.s.
Reparation	.174	.175	< 1	n.s.

* For each behavior, the exposure measure consistent with the behavior was used in the predictive equation. For example, exposure to physical aggression on TV was used to predict physically aggressive behavior.

** An F test was used to test whether the variable entered second into the equation (the perceived reality index) made a significant contribution to the overall explained variance. The formula for the test was:

$$F = \frac{(R^2y.ab - R^2y.a)/M}{(1 - R^2y.ab)/(N-k-1)}$$

where:

M = number of independent variables for which the test is being made.
K = total number of independent variables
a = Exposure
b = Perceived reality
y = behavior
N = sample size (721)

TABLE 2

Zero Order Correlations Between Perceived Reality and Eight Behaviors

Behaviors	Perceived Reality Index	Prosocial Reality Factor	Antisocial Reality Factor
Physical Aggression	.02	-.03	.06*
Verbal Aggression	.00	-.09	.08*
Deceit	.01	-.07*	.07*
Altruism	.05	.08*	.00
Affection	.14*	.18*	.05
Feelings of Others	.07*	.09*	.04
Feelings of Self	.08*	.10*	.03
Reparation	.04	.09*	-.02

*$p < .05$

TABLE 3

Heirarchial Decomposition of the Independent Contribution of TV Exposure and Two Dimensions of the Perceived Reality of TV to Eight Behaviors (Total Group)*

Behaviors	Variables in Equation	R	F**	p<
Physical Aggression	Exposure to Phy. Agg.	.259	<1	n.s.
	+ PRANTI	.260	7.26	.01
	+ PRPRO	.277		
Verbal Aggression	Exposure to Ver. Agg.	.093	2.89	n.s.
	+ PRANTI	.112	15.87	.001
	+ PRPRO	.184		
Deceit	Exposure to Deceit	.018		n.s.
	+ PRANTI	.072	3.55	.01
	+ PRPRO	.131	8.78	
Altruism	Exposure to Altrium	.124		n.s.
	+ PRPRO	.135	2.08	n.s.
	+ PRANTI	.145	2.11	
Affection	Exposure to Affection	.130		.001
	+ PRPRO	.209	19.92	n.s.
	+ PRANTI	.212	1.03	
Feelings of Others	Exposure to Flng. Oth.	.174		n.s.
	+ PRPRO	.181	1.85	n.s.
	+ PRANTI	.182	<1	
Feelings of Self	Exposure to Flng. Slf.	.105		.05
	+ PRPRO	.136	5.55	n.s.
	+ PRANTI	.139	<1	
Reparation	Exposure to Reparation	.175		n.s.
	+ PRPRO	.184	2.44	.05
	+ PRANTI	.199	4.19	

* The two dimensions used were the perceived reality of pro-social aspects of TV (PRPRO) and the perceived reality of anti-social aspects of TV (PRANTI).

** An F test was used to determine whether the two R perceived reality factors individually made a significant contribution to the prediction of the behaviors (n = 721).

TABLE 4 Heirarchical Decomposition of the Independent Contribution of TV Exposure and Two Dimensions of the Perceived Reality of TV to Eight Behaviors For Three Grades*

Behaviors	Variables in Equation	Fourth Grade n=227 R	F	p<	Sixth Grade n=268 R	F	p<	Eighth Grade n=226 R	F	p<
Physical Aggression	Exposure	.235			.278			.359		
	+ PRANTI	.243	< 1	n.s.	.279	< 1	n.s.	.361	< 1	n.s.
	+ PRPRO	.248	< 1	n.s.	.280	< 1	n.s.	.371	1.92	n.s.
Verbal Aggression	Exposure	.072			.109			.230		
	+ PRANTI	.077	< 1	n.s.	.149	2.86	n.s.	.237	< 1	n.s.
	+ PRPRO	.086	< 1	n.s.	.151	< 1	n.s.	.269	3.86	.05
Deceit	Exposure	.082			.098			.138		
	+ PRANTI	.083	< 1	n.s.	.154	3.91	.05	.141	< 1	n.s.
	+ PRPRO	.084	< 1	n.s.	.154	< 1	n.s.	.230	7.80	.01
Altruism	Exposure	.183			.049			.107		
	+ PRPRO	.227	4.29	.05	.056	< 1	n.s.	.126	< 1	n.s.
	+ PRANTI	.228	< 1	n.s.	.105	2.22	n.s.	.137	< 1	n.s.
Affection	Exposure	.086			.115			.135		
	+ PRPRO	.185	6.23	.05	.116	< 1	n.s.	.182	3.46	n.s.
	+ PRANTI	.191	< 1	n.s.	.122	< 1	n.s.	.182	< 1	n.s.
Feelings of Others	Exposure	.218			.064			.223		
	+ PRPRO	.276	6.91	.01	.089	1.09	n.s.	.232	< 1	n.s.
	+ PRANTI	.278	< 1	n.s.	.093	< 1	n.s.	.242	1.19	n.s.
Feelings of Self	Exposure	.161			.069			.091		
	+ PRPRO	.261	10.20	.001	.072	< 1	n.s.	.142	2.76	n.s.
	+ PRANTI	.267	< 1	n.s.	.079	< 1	n.s.	.159	< 1	n.s.
Reparation	Exposure	.214			.073			.171		
	+ PRPRO	.263	5.70	.05	.122	2.58	n.s.	.187	1.34	n.s.
	+ PRANTI	.269	< 1	n.s.	.130	< 1	n.s.	.206	1.78	n.s.

* PRPRO = perceived reality of pro-social aspects of TV; PRANTI = perceived reality of anti-social aspects of TV

An F test was used to determine whether the two perceived reality factors individually made a significant contribution to the prediction of the behaviors.

Appendix A

Conceptual Definitions and Examples of the Eight Pro- and Anti-Social Behaviors[1]

Anti-Social Behaviors

Physical Aggression. Physical aggression included overt behaviors intended to or resulting in fright, injury or damage to oneself, another person, an animal, or physical property, e.g. bombing, burning, defacing property, hitting, physically threatening another person, shooting, stabbing constraint of others, and elaborated fighting.

Verbal Aggression. Verbal aggression involved the sending of noxious symbolic messages, e.g. messages of rejection, verbal threat, or hostility.

Deceit. Deceit was conceptualized as the intentional misleading of someone for purposes detrimental to an individual, group, or institution, e.g. deception for unfair gain, cheating, and fraud.

Pro-Social Behaviors

Altruism. Altruism consisted of sharing, helping and cooperating among humans or animals when engaged in non-illicit acts, e.g. spontaneous gifts or loans of possessions, helping another person achieve a goal, and individuals working together to achieve independent goals.

Affection. Showing affection referred to the overt display or offer of positive emotions towards humans or animals either phsycially or verbally, e.g. hugging, kissing, holding hands, statements of affection.

Expressing Feelings of Self. Expressing feelings of self consisted of verbal statements explaining the feelings, thinking or action of self which attempted to effect positive outcomes, e.g. attempts to increase the understanding of others' understanding of self's feelings, to resolve strife and to smooth out difficulties or to alleviate tension experienced by the self.

[1] Taken from Greenberg, B.S., C.K. Atkin, N.G. Edison, and F. Korzenny, "Pro-Social and Anti-Social Behaviors on Commercial Television in 1975-76," Department of Communication, Michigan State University, 1977.

Expressing Feelings of Others. Expressing feelings of others consisted of both explaining the feelings of others and expressing sympathy for others and their problems including verbal sympathy directed toward the recipient or in conversations with others about the recipient, e.g. expressing concern during a hospital visit and expressing sympathy by putting an arm around someone.

Reparation. Reparation for bad behavior referred to behavior which was clearly intended to correct a behavior committed by the person and judged as a wrong doing by that person, e.g. apologies, admission of a mistake, and attempts to insure that the wrong doing would be eliminated or reduced.

Appendix B

Operational Definitions of the Eight Pro- and Anti-Social Behaviors

An index was created for each of the eight behaviors which consisted of three types of questions: (1) hypothetical situations; (2) contingent behavioral reports; and (3) frequency of behavior reports. An example question from each type is listed below for each behavior.

Physical Aggression

1. What if someone cut in front of you in a long line. What would you do? Would you push them out? (yes/maybe/no)

2. When someone hits you, how often do you fight back? (almost always/usually/sometimes/almost never)

3. In the last week, how many times did you push or shove someone? (didn't do it/once or twice/three or four times/five or six times/seven or more times)

Verbal Aggression

1. Suppose you are playing a ball game and one kid throws the ball at your head while you aren't looking and it hits you. Would you shout bad names at the kind?

2. When someone makes you really mad, how often do you tell them that you'll get them back?

3. In the last week, how many times did you yell or scream at someone?

Deceit

1. Suppose you accidentally step on a little kid's toy and break it, but the kid doesn't know who did it. Would you say that someone else broke it?

2. If you really want to win a game, how often do you cheat?

3. In the last week, how many times did you tell a lie to someone?

Altruism

1. What if your friends are playing a game and really need one more person to play, but you don't like that game. Would you help them find another player?

2. How often do you help people after they've asked for help?

3. In the last week, how many times did you do a favor to help someone?

Affection

1. Suppose one of your favorite relatives comes to town to visit your family. What would you do when you see them? Would you give them a hug?

2. When you see someone that you really like a lot, how often do you hug or kiss them?

3. In the last week, how many times did you show your mother that you really love her?

Expressing Feelings of Self

1. You work really hard to finish your homework for school. Some kid takes your papers and rips them up. Would you tell them you feel mad?

2. When you feel sad, how often do you try to explain your feelings to someone?

3. In the last week, how many times did you tell someone how you feel inside?

Expressing Feelings of Others

1. What if a friend is feeling bad because they are making stupid mistakes while trying to play a new game. Would you explain that you know how they feel?

2. When you see someone who has been sick, how often do you ask them how they feel?

3. In the last week, how many times did you try to make somebody feel better?

Reparation

1. Suppose you accidentally step on a little kid's toy and break it, but the kid doesn't know who did it. Would you tell the kid you're really sorry?

2. How often do you apologize when you hurt someone's feelings?

3. In the last week, how many times did you tell someone you are sorry for something you did?

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